

REMARKS

In the Office Action, the election of claims 1-16 and 42 was acknowledged and the restriction made final. Claims 1-17 and 42 were rejected under 35 USC 103(a) over USPN 6,350,431 to Snow et al. ("Snow").

The rejection under 35 USC 103(a) over USPN 6,350,431 to Snow et al. ("Snow").

Claims 1-17 (16 is believed intended) and 42 were rejected under 35 USC 103(a) over Snow. This rejection and the characterizations of Applicants' claimed invention and of Snow are traversed.

The Office Action asserted at page 3 that the polymer compound of Snow's formula I at column 2, line 40 had an organic linking group L, connecting at least one polyalkylene oxide to at least one chromophore. The functionalized PAO and chromophores of Snow were said to be readable in Applicants' claims, and the polymer having the structure in claim 42 was said to be readable on Snow's invention because the definitions of each segment in the formula of claim 42 could allegedly be selected from the range of functional monomeric units and a polyalkylene oxide moiety having a cationic group. The Office Action asserted that the dendrimer polymer of Snow described at col. 3 lines 15-16.

The Office Action also asserted at page 3 that "Snow does not disclose the angled linker that form an angle of less than about 155° by adjusting two polymeric units. An angled linker is not specified in the present claims." However, Applicants' claims do specify this limitation.

Claim 1 specifically recites "[a] conformationally flexible cationic conjugated polymer comprising at least one angled linker having bonds to its two adjacent polymeric units which form an angle of less than about 155°" Claim 42 includes this limitation by reference to claim 1 and by the definitions of LU₁ and LU₂ explicitly recited. Snow neither teaches nor suggests these limitations.

The recitation of "conjugated polymer" in Applicants' claims requires that the polymer have a network of alternating single and multiple bonds to allow the formation of an extended pi-bonded chain in the polymer. The polyalkylene oxide of Snow cannot meet this limitation.

Snow simply describes a polyalkylene oxide linked to multiple chromophore units used for in vivo imaging. The PAO moiety is used as a vehicle to transport the chromophores

throughout the subject and thus prevent the rapid excretion of the smaller chromophores through the kidneys. This mode of extending circulatory half-life is well known.

Furthermore, the angled linker is described in the specification at page 17 line 3 to page 18 line 23. Page 17 lines 10-14 recite:

The angled linker(s) are optionally substituted aromatic molecules having at least two separate bonds to other polymer components (e.g., monomers, block polymers, end groups) that are capable of forming angles relative to one another which disrupt the overall ability of the polymer to form an extended rigid-rod structure (although significant regions exhibiting such structure may remain.)

Thus, the angled linker(s) must be aromatic. The polyalkylene oxide of Snow cannot meet this limitation. The reference to a branched polymer in Snow does not meet this claim limitation. There is no teaching or suggestion in Snow of an angled aromatic linker forming part of a conjugated polymer as claimed.

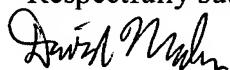
While the chromophores of Snow might be argued to be conjugated polymers in some instances, they are not joined by aromatic angled linkers having angles to the adjacent monomeric units of less than about 155° , and thus similarly cannot meet the claim limitations.

As all claim limitations are not contained in the cited reference, obviousness has not been established. Withdrawal of the rejection is respectfully requested.

Conclusion

As the claims are believed in order for allowance, a notice to that effect is respectfully requested. Should the Examiner disagree, a telephonic interview is respectfully requested prior to the issuance of a subsequent Office Action so that any remaining issues can be discussed. The undersigned may be reached at (858) 587-7658.

Respectfully submitted,



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